CELAL IBRAHIMLI

AI / MACHINE LEARNING ENGINEER | COMPUTER VISION | NLP & TRANSFORMERS | ML SYSTEMS

Baku, Azerbaijan | +994 99 700 81 88 | celal1ibrahimli@gmail.com

Portfolio | GitHub | LinkedIn | Hugging Face | Medium

PROFESSIONAL SUMMARY

AI / Machine Learning Engineer with hands-on experience in production-oriented computer vision, NLP, Transformers, and reproducible ML systems. Build data preprocessing, model training and evaluation, benchmarking, structured inference, and API-ready integration workflows. Applied research in imbalanced classification, geospatial AI, and decision-making under partial observability.

PROFESSIONAL EXPERIENCE

Applied AI Research & Machine Learning Engineer — Digigo / TERZ | Jun 2026 – Present | Baku | Part-time

- Develop wardrobe intelligence pipelines with RF-DETR and RTMDet for garment detection, instance segmentation, and structured outputs used by downstream product features.
- Compare model quality, latency, GPU memory usage, and real-image failure cases; establish reproducible evaluation criteria and benchmark workflows.
- Use PyTorch, DVC, MLflow, dataset manifests, validation checks, and Git-based workflows; export ONNX models and validate OpenVINO inference consistency.
- Collaborate with engineering and product teams on data contracts, integration requirements, and model-ready interfaces.

Applied AI Research & Machine Learning Engineer — Clickusta | Oct 2026 – Present | Freelance / Remote

- Contribute to an AI assistant for Instagram businesses, combining catalogue-grounded RAG, visual product retrieval, multilingual responses, and human handoff workflows.

TECHNICAL SKILLS

Programming & Data: Python, SQL, pandas, NumPy, SciPy, Jupyter, Git, GitHub/GitLab, Linux/Bash, OOP, REST APIs

Machine Learning: scikit-learn, XGBoost, Logistic Regression, Random Forest, SVM, feature engineering, imbalanced learning, cross-validation, Optuna, SHAP, threshold tuning, F1, ROC-AUC, PR-AUC

Deep Learning: PyTorch, TorchVision, CNNs, LSTM/BiLSTM, Transformers, ViT, transfer learning, custom training loops, AMP, optimizers and schedulers

Computer Vision: OpenCV, Albumentations, YOLO, RF-DETR, RTMDet, U-Net, CLIP, detection, segmentation, tracking, OCR, mAP, IoU, Dice

NLP & Retrieval: Hugging Face Transformers, NER, GLiNER, TF-IDF, embeddings, semantic search, FAISS, RAG, structured extraction

MLOps & Deployment: DVC, MLflow, experiment tracking, data validation, CUDA, ONNX, OpenVINO, FastAPI, Pydantic, Docker, pytest, Streamlit, Gradio

Spatial AI: PyBullet, occupancy grids, depth-based mapping, path planning, active sensing, graph-based routing

RESEARCH & PUBLICATIONS

AOE-AZ — Open-Ended Answer Assessment in Azerbaijani | Research initiative | 2026 – Present

- Originated the core concept for Azerbaijani open-ended answer assessment and personalised learning. The AOE-AZ research initiative secured a 30,000 AZN grant in 2026; collaborating with Prof. Shahnaz Shahbazova on research development and planning with an international proposed research team.

Beyond Accuracy: Handling Extreme Class Imbalance in Real-World Marketing Conversion Prediction | Preprints.org | 2026

- Analysed 45,211 UCI Bank Marketing records; compared classification and imbalance-handling approaches using F1, PR-AUC and ROC-AUC. DOI: 10.20944/preprints202610.0579.v1 View DOI

SELECTED PROJECTS

Wildfire Intelligence Azerbaijan | Computer Vision + Tabular ML + Geospatial Analytics | GitHub

- Built U-Net satellite segmentation and Random Forest risk analysis with NASA FIRMS data and a Streamlit/Folium dashboard; trained on 3,556 samples from 178 events; test Dice 0.549.

Observe Before You Move (OBYM) | Robotics + Active Sensing | GitHub

- Built depth-based simulation and partial occupancy mapping; evaluated viewpoint selection and replanning under partial observability.

CITYPILOT | Graph Algorithms + FastAPI + Decision Support | GitHub

- Co-developed multimodal transport disruption planning; evaluated 2,718 origin–destination pairs and resource-constrained routing scenarios.

Handwritten Text Recognition | Deep Learning + OCR | GitHub

- Implemented CNN–BiLSTM–CTC recognition, TrOCR inference, document line segmentation, and a Gradio interface.

EDUCATION

Azerbaijan State University of Economics (UNEC) | BSc, Information Technologies | 2023 – Jul 2027

GPA: 98.38/100 | Entrance score: 656.4/700 | UNEC TOP15 Scholarship

Div Academy | AI Engineering Programme | 2025 – 2026

AWARDS, CERTIFICATIONS & LANGUAGES

Awards: Innovation and Artificial Intelligence Scholarship (25 of 1,800+ applicants); Geleceyi Yazanlar AI Engineering Scholarship; ALPLogo National Competition — 3rd place; AYNA TransportTech & NeuroBridge.SI finalist.

Certifications: DeepLearning.AI — Supervised Machine Learning; Advanced Learning Algorithms; Unsupervised Learning; PyTorch Fundamentals & CNNs. IELTS Academic 7.5 (Oct 2026).

Languages: Azerbaijani (native), Turkish (fluent), English (IELTS 7.5), German (basic).